At page 10, replace the paragraph after line 17 with the following rewritten paragraph:

D2

--Fig. 16 shows a partitioned routing table for the same two customers as in Fig. 15;--

At page 11, replace the paragraph beginning at line 5 with the following rewritten paragraph:

D3

--Referring to Fig. 7, a block diagram of a wide area network (WAN) 1 incorporating aspects of the present invention is shown. The WAN 1 includes a plurality of customer premises equipment (CPE), for example routers located at each of the end user locations and interconnected via one or more service provider's networks (SPNs) 500. The SPN 500 is typically connected to a plurality of endpoint routers 919 via a plurality of corresponding user network interfaces (UNIs) 402 and/or one or more internet protocol (IP) switches 502. The IP switches 502, UNIs 402, and/or routers/switches 501 may be interconnected so as to form a meshed network (e.g., a partial or fully meshed network). Additionally, the wide area network (WAN) 1 may contain any number of IP switches 502 located within the WAN 1 such that it is not connected directly to any endpoint routers 919, and/or one or more IP switches 502 may be located at an interface between the SPN 500 and an endpoint router 919. In further embodiments of the invention, there may be multiple endpoint routers 919 associated with a UNI 402/IP switch 502 and/or multiple UNIs 402/IP switches 502 associated with an endpoint router 919.--

At page 12, replace the paragraph beginning at line 9 with the following rewritten paragraph:

D4

--In some embodiments, the WAN 1 may include a combination of conventional network switches and/or routers 501 in addition to IP switches 502. On the other hand, every switch in the

SPN 500 may be an IP switch 502. Alternatively, the WAN 1 may contain only a single IP switch 502. The IP switches 502 may be variously configured to include a suitable multi-layer routing switch such as a Tag Switch from Cisco. Multi layer routing switches may also be utilized from vendors such as Ipsilon, Toshiba, IBM, and/or Telecom. IP switches are currently being developed to replace endpoint routers so that customer premises equipment (e.g., Ethernet local area network (LAN) equipment) can connect directly to an asynchronous transfer mode (ATM) network. Aspects of the present invention propose using IP switches in a different manner to maintain the huge installed base of customer premises equipment while avoiding the limitations of previous systems. Accordingly, the IP switches in accordance with embodiments of the invention are disposed within the SPN 500 and modified to provide suitable routing and interface functions.--

D4

At page 13, replace the paragraph beginning at line 10 with the following rewritten paragraph:

--In further embodiments of the invention, an endpoint router 919 may encapsulate one or more IP packets in frame relay frames 914. In this event, the frame relay frames may be transmitted between an endpoint router 919 and a corresponding UNI 402 and/or IP switch 502. The endpoint router 919 encapsulates IP packets 950 with frame relay frames 914. Further, the endpoint router 919 may set the DLCI of each frame relay frame 914 according to a particular service category (if a service category DLCI is used) that the user has selected. For example, the various service categories may include the public internet, communication via a local intranet, communication within a closed user group (CUG), communication with an extranet (e.g., a network of trusted

D5

suppliers or corporate trading partners), live audio/video transmission, multicasting, telephony over internet protocol (IP), or any combination thereof. Thus, the concept of a frame relay PVC is significantly expanded by aspects of the present invention. For example, the location of an intended network endpoint recipient is not necessarily determined by a DLCI at the endpoint routers 919.--

D5

At page 14, replace the paragraph beginning at line 2 with the following rewritten paragraph:

--In further embodiments of the invention, a UNI 402 may receive frame relay frames 914 from an endpoint router 919 and divides and encapsulates frame relay frames into, for example, smaller fixed-length ATM cells. The UNI 402 may further translate the frame relay DLCI into an ATM address (e.g., a virtual path identifier/virtual channel identifier (VPI/VCI)). There are various methods which may be used to translate DLCIs to VPI/VCIs. For example, the Network Interworking Standard as defined in Implementation Agreement #5 of the Frame Relay Forum, and/or the Service Interworking Standard as defined in Implementation Agreement #8 of the Frame Relay Forum may be utilized. An ATM address associated with a service category DLCI defines an ATM virtual path via network routers to an IP switch 502. Thus, ATM data associated with a service category DLCI is ultimately sent to an IP switch 502. However, ATM data associated with a conventional DLCI may or may not be sent to an IP switch 502 and may be routed through the network without passing through an IP switch 502. Thus, both translated IP data and conventional PVC data may be present in the SPN 500 and/or WAN 1.--

D6

At page 15, replace the paragraph beginning at line 20 with the following rewritten paragraph:

--At the UNI 402, the switching based on the DLCI takes place. The packet may be routed to IP switch 502 in the center of the SPN 500. The first packet has its layer 2 frame stripped off as it is forwarded to VPN A. Within VPN A, the layer 3 address is now used to make routing decisions that send the packet to its destination UNI. Thus, no PVC need be established ahead of time for that path, and conventional routing methods and protocols can be used, as well as newer "short-cut" routing techniques. This permits VPN A to provide a high "mesh" of connectivity between sites without requiring the customer to configure and maintain the "mesh" as a large number of PVCs. The packet forwarded to VPN B is treated similarly except that VPN B is implemented with a lower service class (e.g. higher delay). Finally, the packet forwarded to PVC D has its layer 2 frame intact and passes through the network as a conventional frame relay frame. This allows customers to maintain their current connectivity of PVCs for their high utilization traffic paths, but still have a high mesh of connectivity through various VPNs.--

D7

At page 20, replace the paragraph beginning at line 13 with the following rewritten paragraph:

--As the service grows, the functionality for making the VPN routing decisions may be migrated closer to the customer and may eventually be present in every switching node, as shown in Fig. 13. This can reduce the backhaul previously needed to get to the router/switch processing nodes and allow for optimal routing using all the nodes in the WAN 1 and/or SPN 500. In the exemplary embodiment of Fig. 13, VPN #1 is connected to Customer Sites A, B, C, and D. Here, every switching node includes a switch 1501 and a routing element 1502. Frame relay frames 1500 having

D8